DOOSAN Document Transmittal Upper Trishuli-1 HEP (216MW)		Date 2022-07-06	DT No.: UT1-HEP-DHI-PC-D-0039	SHEET 1 OF 1
DOOSAN NEPAL BRANCH OFFICE	Address & Contact No. : Four Square Building, Naxal, Kathmandu, Nepal (P.O Box : 1387) + 977 1 692 3014	Project No. H20002	DOCUMENT DISPATCHED BY Courier Service ☐ Messenger ☐ Post-Air Freight ☐ Document System or E-mail ■ By hand ■	
DOCUMENT DISTRIBUTION	■ POWER CHINA (Subcontractor) ☐ Doosan's Site Office			
SUBJECT	Review Note RN-0128_Layout Drawing of Headrace Tunnel			

S. N.	REVIEW NOTE NO.	REVIEW STATUS	DWG. / DOC. NO.	REV.	DWG. TITLE / DOC. DESCRIPTION	REMARK
1	RN-0128	RR	UT1-C-150-CVL-DG-54001	0A	Layout Drawing of Headrace Tunnel	
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

Received by :

Date :

Legend of Review Status
A : APPROVED
AN : APPROVED AS NOTED
RR : RETURN FOR RESUBMISSION
FI : FOR INFORMATION

DHI STAMP

Doosan Enerbility Co., Ltd
DOOSAN Enerbility
Branch Office Nepal

Issued by DHI

Youngsoo Son

Project Manager

Email: youngsoo.son@doosan.com
Doosan Heavy Industries & Construction Co., Ltd.

Discipline : Civil

UPPER TRISHULI-1 HEP (216MW)

Client	**Nepal Water and Energy Development Company Private Limited**
Owner's Engineer	**Tractebel Engineering GmbH / Jade Consult**

REVIEW NOTE

Contractor	**Doosan Enerbility**		
Title of the Document	Layout Drawing of Headrace Tunnel		
Document No.	UT1-C-150-CVL-DG-54001	Revision	0A
Date of Documents	01.05.2022	Received Date	06.05.2022
Transmittal Form No.	UT1-HEP-DHI-D-0219		
Previous Review Date/Status	N/A	Prev. Review Note No.	N/A
Review Note No.	**RN-0128**	**Present Review Date**	**06.07.2022**
		Present Review Status	**RR**

A: Approved AN: Approved as Noted RR: Returned for Resubmission FI: For Information, only

Comments

1. This review note gives comments only to topographic topics of the abovementioned document.
2. Comments of Review Note *RN-0127*, submitted with letter *OE-TJ-UT1-OUT Site-DHI 173* on 22nd of May 2022 are valid for this review note as well.
3. **Comments to UT1-C-150-CVL-DG-54001 Rev. 0A, Sheet no. 1 of 11:**
   (a) all coordinates of control point (W1~W16) are not in readable text format due to improper scale of drawing. Even single text is not readable while printing A3 Size paper which means it is like rough sketch. The table with coordinates could be shown on a separate sheet.
   (b) The plan of the HRT is presented in scale 1:5000 and the profile in scale 1:1000. However, in the template the scale of 1:2000 is shown.
4. **Comments to UT1-C-150-CVL-DG-54001 Rev. 0A, Sheet no. 2 of 11:**
   (a) In Plan and Profile of HRT (1), B.P. of HRT of W5 is STA. 7+04.263 which is the wrong methodology In the general practice it is indicated like CH. 0+704.263 where before plus means 0 kilometer, after plus means 704 meter and after decimal means centimeter.
   (b) In the plan of HRT (1), the B. P. of HRT of W5 is indicated with STA. 7+04.363 and in the profile with STA. 6+85.192 which is a discrepancy that has to be verified.
   (c) What is the reference of EL.1241.553 of W5, indicated in the profile (elevation of center line or elevation of tunnel invert? It shall be indicated respectively. In general, for tunnel profile the invert EL. Should be mentioned in the drawing which makes it easy for calculation during construction phase.
   (d) In the profile it is indicated that the gradient of s=0.436% starts U/S of W5 which means inside the junction structure of the desander which is very unfavorite. The gradient shall start at W5. The location of W5 indicated in the profile shall be verified.
5. **Comments to UT1-C-150-CVL-DG-54001 Rev. 0A, Sheets no. 3 to 10 of 11 R;**
   (a) Based on match point-1, design elevation 1239.67 for STA. 11+16.795 and slope s=0.436%:
   Match Point-2, 23+28.207, calculated elevation 1234.388
   Match Point-3, 35+39.618, calculated elevation 1229.106
   Match Point-4, 47+51.029, calculated elevation 1223.825
   Match Point-5, 59+62.440, calculated elevation 1218.543
   Match Point-6, 71+73.852, calculated elevation 1213.261
   Match Point-7, 83+85.263, calculated elevation 1207.979

Match Point-8, 95+96.684, calculated elevation 1202.698
End of HRT…,101+94.255, calculated elevation 1200.092
(b) Sheet 4 of 11:
Junction of Adit#1 with HRT: Chainage is not clear due to not in scale text size where design invert elevation with coordinate of junction should be mentioned in the same individual relating page.
(c) Sheet 6 of 11:
W6 and W7 are starting of curve and ending of curve respectively where both starting and ending of curve chainge is not mentioned in plan. It is better if both starting and ending chainage of curve coordinate are mention in same page alone with.
(d) Sheet of 7 of 11:
Junction of Adit#3 with HRT: Elevation is not mentioned and there is a discrepancy existing of stationing shown in the plan (STA 65+60.647) and profile (STA 65+62.474) which has to be verified.
(e) Sheet 8 of 11:
W8 and W9 are starting of curve and ending of curve which are not mentioned coordinate and chainage in the plan.
(f) Sheet 10 of 11:
Junction of Adit#4 with HRT: Stationing and elevation shall be indicated in the plan; the stationing indicated in the profile is not correct and shall be verified.

DISCLAIMER

Any approval will not release the Contractor from any of his obligations under the Contract.

Sebastian Beck, Chief Design Engineer

Ram Giri, Surveyor